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AGRICULTURAL MEMORANDUM NO. 400

Heavy rains and field drainage 6. WALES

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The following stations were examined:-

61. Llandudno (731 mm)
62. Llanerchymedd (1024 mm)
63. Cardiff (1069 mm)
64. Newbridge (1127 mm)
65. Lake Vyrnwy (1605 mm)

The data are given in:-

Table 6A Total occasions in 10 years
Table 6B Occasions in 10 years when soil was below capacity
Table 6C Occasions in 10 years when soil was at capacity

As discussed in Ag Mem 399 Cardiff is anomalous and fits better with the southwestern pattern.

The other four stations fit along very smooth curves, the results for soil at capacity being given in

Table 6D Occasions in 10 years. 50 mm or more. 1-8days. 700-1250 mm
Table 6E Occasions in 10 years. 75 mm or more. 1-8days. 700-1250 mm
Table 6F Occasions in 10 years. 100 mm or more. 1-8days. 700-1250 mm
Table 6G Occasions in 10 years in individual categories of days and rainfall

Any comments or suggestions on this paper should be referred to the author.

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Table 6A Total occasions in 10 years (a) 50-75 mm (b) 75-100 mm (c) over 100 mm

Site	Annual Average		Period of Days 1	2	3	4	5	6	7	8 days or less
Llandudno (Caerns)	731	(a)	1	5	9	17	35	64	104	152
		(b)	0	0	1	2	3	6	9	13
		(c)	0	0	0	0	0	0	0	1
		TOTAL	1	5	10	19	38	70	113	166
Llanerchymedd (Anglesey)	1024	(a)	0	3	22	51	96	156	227	305
		(b)	0	1	2	5	9	22	42	72
		(c)	0	0	0	0	1	2	3	5
		TOTAL	0	4	24	56	106	180	272	382
Cardiff (Glam)	1069	(a)	1	9	32	86	164	249	329	406
		(b)	0	0	1	8	18	35	63	112
		(c)	0	0	0	0	0	1	3	10
		TOTAL	1	9	33	94	182	285	395	528
Newbridge (Radnor)	1127	(a)	1	7	23	60	107	163	233	304
		(b)	0	2	4	10	23	43	74	105
		(c)	0	0	0	1	2	4	7	13
		TOTAL	1	9	27	71	132	210	314	422
Lake Vyrnwy (Merioneth)	1605	(a)	5	35	101	197	281	379	506	585
		(b)	1	6	12	43	88	139	169	219
		(c)	0	1	7	12	29	60	109	161
		TOTAL	6	42	120	252	398	578	784	965

Table 6B Soil <u>below</u> Capacity (a) 50-75 mm (b) 75-100 mm (c) Over 100 mm

Site	Annual Average		Period of Days 1	2	3	4	5	6	7	8 days or less
Llandudno	731	(a)	1	2	5	8	13	19	25	33
		(b)	0	0	0	0	0	1	2	3
		(c)	0	0	0	0	0	0	0	0
		TOTAL	1	2	5	8	13	20	27	36
Llanerchymedd	1024	(a)	0	1	4	6	17	31	45	67
		(b)	0	0	0	1	1	1	3	5
		(c)	0	0	0	0	0	0	0	0
		TOTAL	0	1	4	7	18	32	48	72
Cardiff	1069	(a)	0	0	4	14	25	34	44	57
		(b)	0	0	0	0	1	4	9	15
		(c)	0	0	0	0	0	0	0	0
		TOTAL	0	0	4	14	26	38	53	72
Newbridge	1127	(a)	0	1	5	9	13	18	18	24
		(b)	0	0	0	0	1	3	8	12
		(c)	0	0	0	0	0	0	0	0
		TOTAL	0	1	5	9	14	21	26	36
Lake Vyrnwy	1605	(a)	0	3	8	12	13	24	33	44
		(b)	0	0	0	1	5	6	7	8
		(c)	0	0	0	0	0	0	0	0
		TOTAL	0	3	8	13	18	30	40	52

Table 6C Soil at Capacity (a) 50-75 mm (b) 75-100 mm (c) over 100 mm

Site	Annual Average		Period of days 1	2	3	4	5	6	7	8 days or less
Llandudno	731	(a)	0	3	4	9	22	45	79	119
		(b)	0	0	1	2	3	5	7	10
		(c)	0	0	0	0	0	0	0	1
		TOTAL	0	3	5	11	25	50	86	130
Llanerchymedd	1024	(a)	0	2	18	45	79	125	182	238
		(b)	0	1	2	4	8	21	39	67
		(c)	0	0	0	0	1	2	3	5
		TOTAL	0	3	20	49	88	148	224	310
Cardiff	1069	(a)	1	9	28	72	139	215	285	349
		(b)	0	0	1	8	17	31	54	97
		(c)	0	0	0	0	0	1	3	10
		TOTAL	1	9	29	80	156	247	342	456
Newbridge	1127	(a)	1	6	18	51	94	145	215	280
		(b)	0	2	4	10	22	40	66	93
		(c)	0	0	0	1	2	4	7	13
		TOTAL	1	8	22	62	118	189	288	386
Lake Vyrnwy	1605	(a)	5	32	93	185	268	355	473	541
		(b)	1	6	12	42	83	133	162	211
		(c)	0	1	7	12	29	60	109	161
		TOTAL	6	39	112	239	380	548	744	913

Table 6D WALES 50 mm or more: Occasions in 10 years Soil at Capacity

Annual Average	1	2	3	4	5	6	7	8 days or less
700	0	2	4	10	20	40	70	120
750	0	2	6	12	26	55	90	140
800	0	3	8	14	34	70	110	165
850	0	3	10	18	43	85	135	195
900	0	4	12	23	54	100	160	225
950	0	4	15	29	66	120	185	260
1000	0	5	18	36	80	140	210	295
1050	1	6	21	45	95	160	240	330
1100	1	7	25	57	110	180	270	370
1150	1	9	31	69	130	210	310	415
1200	2	12	37	82	150	240	350	465
1250	2	15	43	97	175	270	390	515

Table 6E WALES 75 mm or more: Occasions in 10 years Soil at Capacity

Annual Average	1	2	3	4	5	6	7	8 days or less
700	0	0	0	1	2	3	6	10
750	0	0	0	1	2	6	10	15
800	0	0	1	2	3	9	15	22
850	0	0	1	2	4	12	21	30
900	0	1	2	3	6	15	27	40
950	0	1	2	4	9	19	34	55
1000	0	1	2	5	12	24	41	70
1050	0	1	3	9	16	32	55	90
1100	0	1	3	10	20	40	70	110
1150	0	2	4	13	25	51	87	130
1200	0	2	5	16	30	63	105	155
1250	0	2	6	19	40	76	125	175

Table 6F WALES 100 mm or more: Occasions in 10 years Soil at Capacity

Annual Average	1	2	3	4	5	6	7	8 days or less
700	0	0	0	0	0	0	0	1
750	0	0	0	0	0	0	0	2
800	0	0	0	0	0	0	0	3
850	0	0	0	0	0	0	1	4
900	0	0	0	0	0	0	1	5
950	0	0	0	0	0	1	2	6
1000	0	0	0	0	1	2	3	7
1050	0	0	0	0	1	3	5	8
1100	0	0	0	1	2	4	7	11
1150	0	0	0	1	3	6	9	15
1200	0	0	0	2	4	9	14	25
1250	0	0	1	3	6	13	21	37

Table 6G WALES Occasions in 10 years (a) 50-75 mm (b) 75-100 mm
Soil at Capacity (c) 100 mm or more

Annual Average		Period 1	2	3	4	5	6	7	8	days but not less
700	(a)	0	2	2	5	9	19	27	46	
	(b)	0	0	0	1	1	1	3	3	
	(c)	0	0	0	0	0	0	0	1	
	TOTAL	0	2	2	6	10	20	30	50	120
750	(a)	0	2	4	5	13	25	31	45	
	(b)	0	0	0	1	1	4	4	3	
	(c)	0	0	0	0	0	0	0	2	
	TOTAL	0	2	4	6	14	29	35	50	140
800	(a)	0	3	4	5	19	30	34	48	
	(b)	0	0	1	1	1	6	6	4	
	(c)	0	0	0	0	0	0	0	3	
	TOTAL	0	3	5	6	20	36	40	55	165
850	(a)	0	3	6	7	23	34	41	51	
	(b)	0	0	1	1	2	8	8	6	
	(c)	0	0	0	0	0	0	1	3	
	TOTAL	0	3	7	8	25	42	50	60	195
900	(a)	0	3	7	10	28	37	48	52	
	(b)	0	1	1	1	3	9	11	9	
	(c)	0	0	0	0	0	0	1	4	
	TOTAL	0	4	8	11	31	46	60	65	225
950	(a)	0	3	10	12	32	44	50	54	
	(b)	0	1	1	2	5	9	14	17	
	(c)	0	0	0	0	0	1	1	4	
	TOTAL	0	4	11	14	37	54	65	75	260
1000	(a)	0	4	12	15	37	48	53	56	
	(b)	0	1	1	3	6	11	16	25	
	(c)	0	0	0	0	1	1	1	4	
	TOTAL	0	5	13	18	44	60	70	85	295
1050	(a)	1	4	13	20	41	49	57	55	
	(b)	0	1	2	4	8	14	22	31	
	(c)	0	0	0	0	1	2	2	3	
	TOTAL	1	5	15	24	50	65	81	89	330
1100	(a)	1	5	16	25	43	50	60	60	
	(b)	0	1	2	6	9	18	27	36	
	(c)	0	0	0	1	1	2	3	4	
	TOTAL	1	6	18	32	53	70	90	100	370
1150	(a)	1	6	20	29	49	54	64	62	
	(b)	0	2	2	8	10	24	32	37	
	(c)	0	0	0	1	2	3	3	6	
	TOTAL	1	8	22	38	61	81	99	105	415
1200	(a)	2	8	22	34	54	57	68	65	
	(b)	0	2	3	9	12	28	37	39	
	(c)	0	0	0	2	2	5	5	11	
	TOTAL	2	10	25	45	68	90	110	115	465
1250	(a)	2	11	24	41	57	59	71	75	
	(b)	0	2	3	11	18	29	41	34	
	(c)	0	0	1	2	3	7	8	16	
	TOTAL	2	13	28	54	78	95	120	125	515